Exhibit 4
to Mao Declaration ISO Plaintiffs' Motion for Leave to Amend Complaint

Public Redacted Version

Message
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From: Shen-En Shih [⬛⬛⬛⬛⬛⬛⬛⬛]
Sent: 8/7/2020 8:45:44 PM
To: Grace Shih [⬛⬛⬛⬛⬛⬛]; Nuo Shi [⬛⬛⬛⬛⬛⬛]
CC: Chris Ruemmler [⬛⬛⬛⬛⬛⬛]; Glenn Wilson [⬛⬛⬛⬛⬛⬛]; Kathy Hwang
              [⬛⬛⬛⬛⬛⬛]; John Chaddon [⬛⬛⬛⬛⬛⬛]; Arwa Rangwala [⬛⬛⬛⬛⬛⬛]; Kiran
              Chandramohanan [⬛⬛⬛⬛⬛⬛]; Leo Deegan [⬛⬛⬛⬛⬛⬛]
Subject: Re: Questions to decouple SAA and A4W launches from Reminders Dasher launch

Thank you all for the online and offline discussions, It's now super clear to me that Apps Reminders (e.g., created via Calendar) should not be shown if SAA-GSuite is disabled.

Here's our proposal to move things forward:

2020 Aug (Before SAA-GSuite bit is implemented):
1) Disable Reminders feature if SAA bit is off, and
2) Launch Reminders for Dashers.

Before 2020 Sep/Oct (After SAA-GSuite is implemented):
1) Filter out Apps Reminders if SAA-GSuite bit is off (with some TTS so user will know there are some Reminders are filtered out)

Does this look good to you? ⬛Chris Ruemmler ⬛John Chaddon ⬛Grace Shih ⬛Nuo Shi

On Thu, Aug 6, 2020 at 12:25 PM Grace Shih ⬛⬛⬛⬛⬛⬛ wrote:

On Thu, Aug 6, 2020 at 12:08 PM Chris Ruemmler ⬛⬛⬛⬛⬛⬛ wrote:
Thanks Grace. I believe we addressed everything in the meeting today.

For the PR bit, I believe the PRD states that there is Admin control to allow personal results on private or shared devices. So, the admin can turn G Suite SAA on, but disable shared devices which means that the user would not be able to get G Suite data on a shared device (but would on a private device like a phone if the admin enabled that bit).

PRD: https://docs.google.com/document/d/1mgdvW_sAojXkXetCE4ktbNQS5V0bnMTbl33BcxkPxel/edit#

See the "Private" and "Shared" bits under the G Suite SAA bit.

Ah yes, the "Private" vs "Shared" settings under G Suite SAA are planned for a V2 of admin controls. For the V1, it will only be a single G Suite SAA bit and we will be keeping shared device access off.

--Chris

On Thu, Aug 6, 2020 at 10:34 AM Grace Shih ⬛⬛⬛⬛⬛⬛ wrote:
I can take a stab at answering the questions below. Others, please correct if I've misstated anything.

On Wed, Aug 5, 2020 at 10:27 PM Chris Ruemmler ⬛⬛⬛⬛⬛⬛ wrote:
This is still very confusing as I'm not sure I know what the "current" state is vs the "end state" or any intermediate states as well.

AFAIK, today, WAA off turns off the assistant mostly and turns off a bunch of other stuff @ Google that has nothing to do with Web or App Activity. So, we are in a busted state today and that is being fixed (hooray!). However, what is the timeline for that fix to occur? When is assistant (and a bunch of other stuff) unbound from WAA?

Today, does SAA off turn off the assistant completely? That is not clear to me. It seems like in the future SAA does completely disable the assistant.

Let me see if I can summarize the bits today:

WAA - completely broken, no way for the user to determine what this actually controls. Both admin and user controlled, but neither will understand what it actually does.
SAA - turns assistant on/off (fully?), but what does it do for the "S"/Search part? Only admin controlled.
PR (personal results for shared devices only, always "on" for personal devices). Only user controlled.
VAA (voice collection on/off). How is this set for Dasher, off always? Only user controlled?

SAA = Search and Assistant. If this setting is off, it's as if the user is using Search or Assistant in a signed-out mode. Queries they make cannot be attributed to their account. Practically, when we tested this with SAA off, we could not use Assistant at all though I could imagine that Assistant could also operate in a "signed-out" mode. Correct, this is only admin controlled.

VAA = Only user controlled. For Dasher users, this setting is grayed out, off always.

The "future" is:

WAA - completely disassociated from Assistant? Only controls Web and App Activity and nothing else? No Admin control?
SAA - turns assistant on/off (what is "S" still?) Admin controlled only
G Suite SAA - turns on/off assistant for G Suite Data. Admin controlled only.
PR - personal results (split into admin and personal + shared/private) - 4 total bits

WAA = There are still some actions in Assistant that will be affected by this, namely any actions that use your Web and App Activity to provide better recommendations. I can ask the WAA team, but I believe they mentioned Recipe Recommendations as one example. G Suite data access will be completely decoupled from WAA. Target for the completion of decoupling is end of September.

SAA = Same definition as today, no changes to this setting in the future state.

G Suite SAA = Yes, exactly what you described.

PR = User controlled only. Personal Results is a per-device setting, that is, the user can choose to turn PR OFF for the device sitting in their kitchen but PR ON for the device sitting in their home office. There is no equivalent admin control.

So the "pre SAA-GSuite" timeframe is now and the mess we have today, correct? I don't see how we can allow any G Suite data on shared devices without the "future" controls given we have enabled SAA on by default. If SAA was turned off for everyone and they opted in knowing about the risks of turning it on, then you could allow G Suite data with SAA on, but I doubt you'd get many takers. The new controls (the future) look good for giving the Admins control over their data.

Correct. A4W is waiting for the "future" state to be done before launching G Suite features to Dasher users. The question is what we should do about Reminders in Assistant (which is part Apps, part non-Apps).

 VAA is always off for Dasher customers, correct? I believe this to be the case, but just confirming.
Yes VAA is always off for Dasher.

 --Chris

On Wed, Aug 5, 2020 at 2:26 PM Glenn Wilson ██████████████████ wrote:
 Chris, is that enough information and background on this?

 We're specifically looking at the pre-SAA-GSuite bit timeframe, and whether we can show Calendar-created reminders, which would be gated on the current-SAA bit.

 On Tue, Aug 4, 2020 at 2:42 PM Kathy Hwang ████████████████████ wrote:
  Hi Chris,

  This doc also outlines the existing behavior with the combination of different bits:
  https://docs.google.com/document/d/1H23E9MKsz3tS6mJXdM69FJ-jAl5hFvU9ronTYkW-i1U/edit#heading=h.83p5qyog74ca

  This is the PRD for the proposed A4W admin controls that lays out what will happen when different bits are on/off (NOTE: some of the references to PR bit controls in the doc may need to be updated, as they've already rolled out PR bit controls for all Assistant surfaces)
  https://docs.google.com/document/d/1mgdvW_sAojXkXetCE4ktbNQS5V0bnMTbl33BcxkPxeI/edit#

  -Kathy

  On Tue, Aug 4, 2020 at 11:43 AM Chris Ruemmler ████████████████ wrote:
   I'm looking for something that explicitly describes all of the knobs and their default states.
   I don't think I could describe what exactly is enabled and disabled by WAA/SAA/etc. based on current documentation.

   --Chris

   On Tue, Aug 4, 2020 at 11:32 AM Glenn Wilson ███████████████ wrote:
    +Kathy Hwang

    https://docs.google.com/document/d/1FA8klDY2W1wWLywtnY9Tk3gMy65wXCXxd3fE1w9Vcqk/edit#heading=h.56vcw5bbyo4a

    Is the right doc for SAA/WAA/SAA-Gsuite/PR, I believe, but Kathy may have something even more recent.

    On Tue, Aug 4, 2020 at 9:29 AM Chris Ruemmler ████████████████ wrote:
     Grace,

Is there a one-pager that describes how WAA, SAA and G Suite SAA will work together? What turns off what data flows, etc.? Is SAA still a thing after we have G Suite SAA?
Our documentation is very vague and confusing in this area and it would be great for our customers if we had very clear documentation about what exactly happens when you disable WAA/SAA/G Suite SAA/Personal Results, etc.

Thanks,

Chris

On Tue, Aug 4, 2020 at 9:23 AM Grace Shih ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ > wrote:
Hey folks, thanks for starting this discussion. We'll bring it to PWG office hours on Thursday as well.

I think the main question Shen-En is posing is: **Can Apps Reminders for Dasher launch to GA before the G Suite SAA bit is available?**

I wanted to lay out the 2 timelines below I see for A) Waiting for G Suite SAA bit and B) Launching before G Suite SAA bit. Please correct if I've misrepresented anything below.

Timeline A: Wait for the G Suite SAA bit.
1. Sept 2020: WAA decoupling complete. No changes visible to the end user because Apps Reminders is not launched to Dasher users.
2. Sept/Oct 2020: Launch G Suite SAA bit.
3. Sept/Oct 2020: Launch Apps Reminders. Admins can turn on/off access to Apps Reminders by toggling G Suite SAA bit. End users can use Apps Reminders if G Suite SAA is on.

Timeline B: Launch Apps Reminders before G Suite SAA bit.
1. Aug 2020: Launch Apps Reminders. Admins are able to turn on/off access by toggling the WAA bit.
2. Sept 2020: WAA decoupling complete. Apps Reminders are no longer controlled by WAA (only SAA). Therefore, domains that used to have WAA off and SAA on would suddenly get access to Apps Reminders in Assistant. Admins can turn on/off access to Apps Reminders by toggling SAA bit.
3. Sept/Oct 2020: Launch G Suite SAA bit. Admins can turn on/off access to Apps Reminders by toggling G Suite SAA bit. End users can use Apps Reminders if G Suite SAA is on.

A4W features are following Timeline A to avoid the potentially complex messaging that controls for G Suite data is changing between WAA/SAA/G Suite SAA. The question is whether we can decouple Apps Reminders from the G Suite SAA launch (Timeline B) in order to launch it sooner given that there's always a non-zero risk that dependencies slip their expected timelines.

Thanks,
Grace

On Tue, Aug 4, 2020 at 8:49 AM Chris Ruemmler ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ wrote:
Here is the link for SAA: https://support.google.com/a/answer/9089027?hl=en

I was wrong in that you can still use Search and Assistant, Google just won't use any of your data with Search/Assistant and won't save any data to your account. So, that means even normal reminders can't be used with SAA off as that would save information to the user's account. It sounds like you can only use Assistant to do things like ask it about publicly available information (how tall

is Mt. Rainer) or actions like skip to next song. Setting a reminder would be "saving information with their account". You'd need to ask legal what this means for old reminders set (are these allowed to trigger as technically this is

"using information with their account". We should be clear to the user when they disable SAA what this means for their data, for instance, do we need to delete any data saved in Assistant from when SAA was on.

--Chris

On Mon, Aug 3, 2020 at 10:07 PM Shen-En Shih ▉▉▉▉▉▉▉▉▉▉▉ wrote:
For questions around the SAA G Suite bits, I actually meant Apps Reminders.

Our long-term plan is to migrate Apps Reminders to Google Tasks. Once it's done, SAA G Suite bit will be respected as you suggested. This is scheduled in 2021 or 2022 as there are many pending tasks (e.g., gTasks integration with Magus and AS, grammar for gTasks, data migration, federated read, etc.), and our team is actively on it.

To bring back Dashers before that (we're hoping 2020 Q3/Q4), we'll need a short-term solution. My proposal here is to ignore the SAA G Suite bit for now. That is, Assistant will surface Apps Reminders even when SAA G Suite bit is off.

Alternatively, we can respect SAA G Suite bit so that Apps Reminders are filtered out when the bit is off. However, the behavior might confuse the user, as we're now returning only part of the Reminders (unlike other G Suite features where the feature will be disabled **completely**).

Another alternative is to block Reminders completely if SAA G Suite bits are disabled. But I feel this moves us further away from our ultimate goal, as we've agreed Reminders shouldn't be considered as Apps data.

On Mon, Aug 3, 2020 at 7:37 PM Chris Ruemmler ▉▉▉▉▉▉▉▉▉▉▉ wrote:
Shen-En,

On Mon, Aug 3, 2020 at 7:29 PM Shen-En Shih ▉▉▉▉▉▉▉▉▉ wrote:
Hi Chris and John,

We're working on re-enabling Dasher users for Reminders (PDD, waiting for you to review), which enables Dasher to see and manipulate Apps Reminders. Send this email to confirm the plan sounds good to you.

Things we've implemented:
1) **Magus integration:** Apps Reminders are read/write via Magus
2) **Limited logging:** Apps Reminders are not written to
3) **SAA bit:** if SAA bit is off, no Apps Reminder will be fetched or shown.

This sounds good, but doesn't SAA turn off assistant completely? I thought SAA == Search and Assistant.
This makes sense. I'll do another test. Last time I tried, Assistant still works even when SAA it's off. But maybe it's only because I used the admin account of the domain.

So, it seems like it would be a given that no Apps Reminders will be fetched or shown given Assistant is disabled with SAA off.

As Reminders are not Core Apps data, we're planning to **decouple from...**
  4) SAA G Suite bit: Even if bit is off, Apps Reminder will still be returned. Dasher users can still see and manipulate them.
Do you mean Assistant created reminders here? Apps Reminders would seem to be not available if the G Suite SAA bit is off.

  5) SAA G Suite Shared Device bit: Even bit is off, Dasher users can still see and manipulate Apps Reminders on Chirp and DG.

Do you again mean Assistant Reminders (those created with Assistant generally, not Apps related reminders like in Calendar and Keep).

  6) A4W GA Mobile launch: Reminders for Dasher will be launched **separately** from A4W GA Mobile launch.

Seems fine to me

  7) WAA decoupling: Reminders for Dasher will be launched **separately** from this WAA-off launch.

Seems fine to me. So, when the WAA issues are fixed, they will be fixed for Reminders as well?

--Chris